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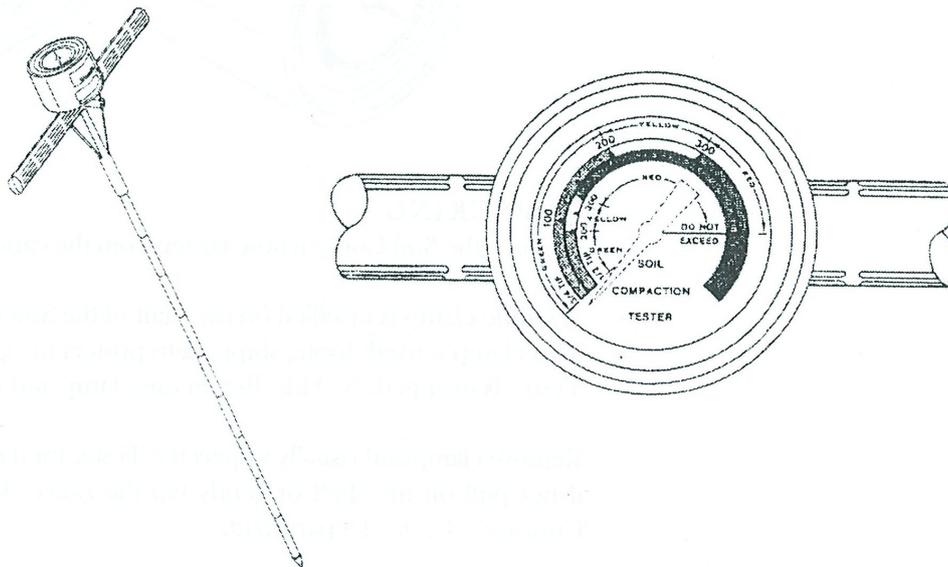
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DICKIE-john Soil Compaction Tester

The DICKIE-john Soil Compaction Tester is a penetrometer which measures the firmness (compaction) of soil. The instrument is supplied with two tips; a 1/2 inch tip for use in firm soil and a 3/4 inch tip for use in soft soil. The dial indicator has two scales (for 1/2 inch tip and 3/4 inch tip) that are calibrated in pounds per square inch of the base area of the cone (tip) and are colour coded for reference only.

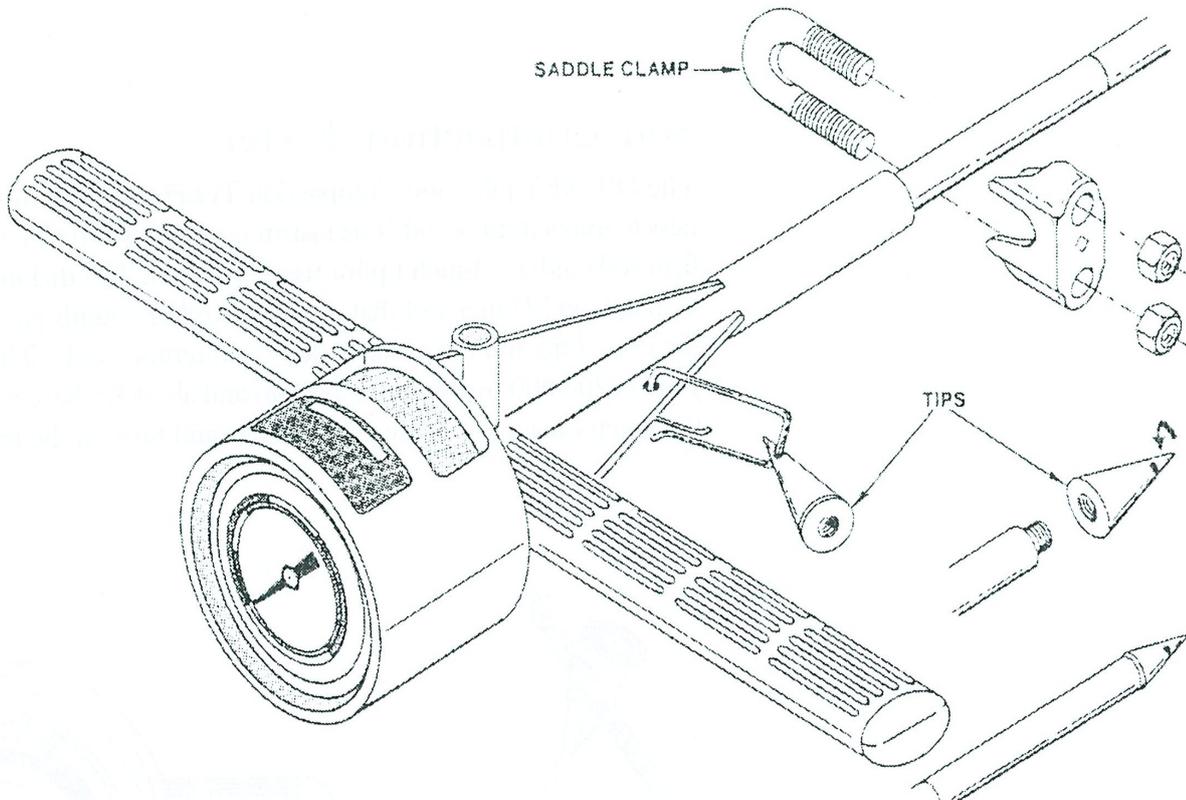
The colours are green (0-200 psi), yellow (200-300 psi) and red (300 psi and above), where most crop roots can grow well in the green range, fair in the yellow range and poor in the red range.



The best time to use the tester is in early spring or when the soil has a good moisture content. As the moisture content and soil texture will affect the readings, the soil compaction tester is best used to compare the readings of the same soil type and moisture content. Check a fence row and then check the field area for comparison. Several tests should be made in an area to get a more accurate reading.

The soil compaction tester should be used before you till to see if you have a compaction layer, how deep your compaction layer is and after you till to see how deep you actually worked the soil and if your tillage operation solved the problem.

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Unpacking

Remove the Soil Compaction Tester from the carton.

A saddle clamp is installed on the shaft of the Soil Compaction Tester next to the plastic housing. This clamp is used during shipping to protect the gauge from damaging spikes which may occur if the Tester is dropped. NOTE: Retain this clamp and reinstall in the event of the Tester being shipped. Remove clamp and visually inspect the Tester for damage. Check the gauge indicator, it should be on "0" if not pull on the shaft or gently tap the gauge.

Operation

To use the Soil Compaction Tester proceed as follows:

1. Select and install the tip(1/2 or 3/4 inch) for you type of Soil.
2. Apply even pressure to the handles on the instrument to keep the rod point penetrating the soil at a slow even pace.
3. The penetrating rod is marked at three inch intervals for easy depth measurement . As the instrument 's rod penetrates the soil the gauge readings at the 3" 6" 9" 12" 15" and 18" depths should be noted.

A compacted layer will be shown by the gauge indicator increasing upscale into the red range and then moving back down scale after passing through the compacted layer. The depth of the beginning of the compacted layer and depth of leaving the compacted layer should be noted.

It can be determined by taking multiple readings if a compaction layer exists, at what depth and how thick. NOTE: Multiple readings in an area will more accurately define the compaction layer should one exist.